

### Remarks/Arguments

Applicants respectfully traverse and request reconsideration of all rejections in the Office Action mailed on May 23, 2005.

#### I. Objections to the Specification

The Examiner has objected to the specification on the grounds that the abbreviations for amino acids have not been defined.

The abbreviations for the amino acids referred to in the specification are set forth in the specification on page 8, line 17 through page 9, line 14. The specification refers to "standard abbreviations" and then lists abbreviations for each of the amino acids used in the specification for which there is no standard abbreviation. The two amino acids mentioned by the Examiner, "Pra" and "Bug," are defined in the specification at page 9, lines 1 and 4, as propargylglycine and tertiary butylglycine, respectively. The "standard abbreviations" are known to one skilled in the art. The upper case single-letter abbreviations refer to the 20 standard amino acids in the L-isomer form, and the lower case single-letter abbreviations refer to the D-isomers. For example, "D" is L-aspartic acid and "d" is "D-aspartic acid." See Lodish, Berk, Zipursky, Matsudaira, Baltimore, and Darnell, *Molecular Cell Biology*, WH Freeman and Company (4<sup>th</sup> edition, 2000), page 52.

#### II. Claim Rejections

##### *A. 35 U.S.C. Section 112, First Paragraph*

The Examiner has rejected claims 1 through 4 as failing to comply with the written description requirement, citing *Eli Lilly*, 119 F.3d at 1568.

*Eli Lilly* does not support the rejection, as that case involved claims to "vertebrate insulin cDNA," which the court distinguished from other chemical materials. The court

stated: "A written description of an invention involving a chemical genus, like a description of a chemical species, 'requires a precise definition, such as by structure, formula, [or] chemical name,' of the claimed subject matter sufficient to distinguish it from other materials." *Id.* at 1568. The court held that a patent application need not describe every species in order for the genus to meet the written description requirement. *Id.* The court further held that generic formulae for chemical materials are normally adequate to describe the claimed genus, except in claims to genetic material written as broadly as those in the case.

Here, Applicants' claims recite a chemical formula that can be distinguished from others by one skilled in the art. That formula is  $cX_2GX_4GX_6X_7c$ , wherein  $X_2$  is either polar and neutral or polar and acidic, and  $X_4$  is hydrophobic. These classifications of amino acids are known to one skilled in the art. These claims are supported by examples 1 - 5 and the ligands identified in those examples. (Examples 6 - 8 pertain to claims 5 - 9, which have been withdrawn without prejudice.) In examples 1 - 5, applicants disclose many different ligands that were specifically identified. This is a sufficient number of species to claim the genus of epithelial cancer cells (claims 1 and 2) and the genus of non-epithelial cancer cells (claims 3 and 4). Applicants have satisfied the written description requirement.

**B. 35 U.S.C. Section 112, Second Paragraph**

The Examiner has rejected the claims as being indefinite on the grounds that the difference between "unnatural" amino acids and "modified" amino acids is not clear. Applicants have amended independent claims 1 and 3 to delete "modified," as was done in the parent patent application. Applicants believe this clarifies the claims.

### III. Double Patenting

Claims 1-4 have been rejected on obviousness-type double patenting over claims 1 and 8 of United States patent no. 6,670,142. The Examiner states that a terminal disclaimer may be used to overcome the rejection if the '142 patent and this application are commonly owned.


The '142 patent and this application are commonly owned, as both are assigned to The Regents of the University of California. Applicants will file a terminal disclaimer in this application after the rejections of the pending claims on other grounds have been resolved.

### IV. Conclusion

In view of the foregoing, it is respectfully requested that the Examiner pass this case to issue. If the Examiner believes further issues remain outstanding or new ones have been generated, Applicants have formally requested an interview with the Examiner, prior to the Examiner's preparation of the response to this Amendment, to address and resolve those issues.

Date: November 22, 2005

Respectfully submitted,

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